

REMARKS/ARGUMENTS

In response to the Office Action dated February 19, 2003, claims 2, 4, 6, 9, 10 and 12 are amended, claim 1 is canceled, and claims 20-26 are added. Claims 2-12 and 20-26 are now active in this application. No new matter has been added.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH Claims 6-8 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In support of this position, the Examiner contends that claim 6 appears to contradict the limitations of claim 1, from which it depends. By this response, claim 1 is cancelled, new independent claims 20 and 21 are submitted, claim 6 is amended to depend from new claim 20, and new claim 23, corresponding to claim 6, is submitted and depends from new claim 21.

With regard to new claim 20, replacing claim 1, the following comments are provided:

- a. Element (b) adds that the light is projected to enter into the skin of a person.
- b. Element (c) - Whereas claim 1 recites "...fluxes having been diffused in the skin...", claim 20 uses the wording "...fluxes having been diffused in the tissues of the person" in view of the fact that at least the light having a longer optical path length is diffused in the subcutaneous tissues of a person considering that an object of the invention is to measure deposited bilirubin concentration. The wording "fluxes having been diffused in the tissues of the person" has been selected considering that the light having a shorter optical path length is primarily diffused inside the epidermal portion and the derma (hypodermal portion).
- c. Element (d) - The wording "...fluxes having been diffused in the skin...", which is recited in claim 1 is changed to "...fluxes having been diffused in tissues of the person..." for the same reason as for element (c). Also, added is the limitation "optical path length of luminous

fluxes which pass through the first light incident port and optical path length of luminous fluxes which pass through the second light incident port are different from each other”.

d. Element (g) - The limitation “so that influence of skin is cancelled by using the luminous fluxes of the different optical path length” is added. The general term “skin” is adopted in place of “subcutaneous tissues” considering that an object of the present invention is to measure bilirubin concentration deposited on the subcutaneous fat.

With regard to claim 21, the following comments are provided:

- a. Element (b) - See the comment regarding claim 20, element (b).
- b. Element (c) - See the comment regarding Claim 20, element (c).
- c. Element (d) - In addition to the feature mentioned in claim 20, Element (d), added are the limitations “the first light incident port and the second light incident port have forms of ring or circle” and “having relative different radii so that the second light incident port being spaced away from the light emerging port a different distance than the first light incident port” (which means the optical path lengths of the first and second light incident ports are different from each other by different relative radii of the first and second light incident ports). These limitations are substantially the same as recited in claims 2 and 3 (it should be noted that the Examiner indicated that claim 3 is allowable and that claim 2 would be allowable if rewritten in independent form) although proposed claim 21 has a slightly broader scope than claims 2 and 3.

It is believed that claim 6 does not contradict new claim 20 and that new claim 23 (similar to claim 6) does not contradict new claim 21. Therefore, it is respectfully urged that the rejection be withdrawn.

REJECTION OF CLAIMS UNDER 35 U.S.C. § 102 AND § 103

Claims 1 and 12 are rejected under 35 U.S.C. § 102(b) as being anticipated by Essenpreis et al. (USPN 5,770,454; hereinafter, Essenpreis).

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Essenpreis, as applied to claim 1, in view of Parker (USPN 5,553,613), and further in view of Caro (USPN 5,348,003).

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Essenpreis, as applied to claim 1, in view of Caro.

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Essenpreis in view of Caro, as applied to claim 6, and further in view of Robinson (USPN 5,830,132).

Claim 9 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Essenpreis, as applied to claim 1, in view of Robinson.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Essenpreis, as applied to claim 1, in view of Robinson, and further in view of Anderson et al. (USPN 5,879,294, hereinafter, Anderson).

To expedite prosecution, claim 1 is canceled, new independent claims 20 and 21 are submitted, as are new dependent claims 22-26, and claims 2, 3, 4, 6, 9, 10 and 12 are amended to depend from new independent claim 20.

New independent claim 20 recites the feature that influence of skin is eliminated by using the luminous fluxes of the different optical path lengths. With this arrangement, eliminated are influences owing to difference in the content of melanin in the skin and difference in growth of skin. Thereby, accurate measurement is carried out.

In contrast, Essenpreis is silent about the above feature. Although Essenpreis illustrates the arrangement provided with a plurality of optical paths and two incident ports 18, 18' (see FIG. 2), Essenpreis does not recite as to whether influence of skin (such as difference in the content of melanin in the skin and difference in growth of skin) is eliminated by using the luminous fluxes of the different optical path lengths. Thus, new independent claim 20 is believed to be patentable over Essenpreis. Consequently, the allowance of new independent claim 20, as well as claims 2-12 depending from new independent claim 20, is respectfully solicited.

Independent claim 21 is based on claims 2 and 3, which the Examiner indicate are allowable in the outstanding Office Action, except that claim 21 recites a slightly broader scope than claims 2 and 3 in that the light emerging port and the light incident ports have forms of ring. New claims 22-26, depending from new independent claim 21, correspond to claims 4, 6, 9, 10 and 12, respectively. Since new independent claim 21 is based on claims 2 and 3, the allowance of new independent claim 21, as well as new dependent claims 22-26, is respectfully solicited.

CONCLUSION

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

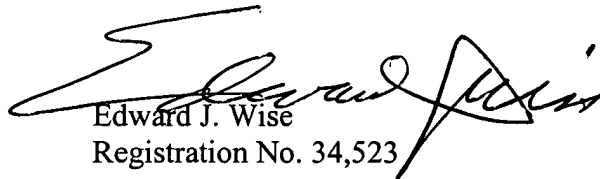
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including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY



Edward J. Wise
Registration No. 34,523

600 13th Street, N.W.
Washington, DC 20005-3096
(202) 756-8000 EJW:cac
Facsimile: (202) 756-8087
Date: August 12, 2003